

INTRAMUSCULAR ROLITETRACYCLINE NITRATE (TETREX PMT) IN NON-SPECIFIC URETHRITIS*

BY

R. STATHAM AND R. S. MORTON

Royal Hospital, Sheffield

With an agreed success rate of about 85 per cent. the role of oral oxytetracycline hydrochloride in the treatment of non-specific urethritis was firmly established a decade ago. Other oral tetracyclines have proved of similar value.

While the results obtained with intramuscular oxytetracycline and other tetracyclines have been comparable, the incidence of pain at the injection site has been such that this form of administration could not be recommended for routine use (Morton, 1961).

Intramuscular medication avoids gastrointestinal side-effects, eliminates sharing of treatment with a consort, and gives proof that treatment has been taken. Rolitetracycline nitrate has advantages over former tetracyclines in that it is said to cause significantly less pain on injection, is more efficiently absorbed, and produces and maintains adequate blood levels for 24 hours after a single intramuscular injection. It was therefore proposed to conduct a trial of this preparation in the treatment of non-specific urethritis.

Each vial of Tetrex PMT contains:

Rolitetracycline nitrate (N-pyrrolidinomethyl tetracycline)	350 mg.
Lignocaine hydrochloride	40 mg.
Ascorbic Acid	575 mg.
Magnesium gluconate	253 mg.

Lignocaine is a potent local anaesthetic with low toxicity and minimal sensitization potential. Ascorbic acid and magnesium gluconate are included for their buffering qualities.

Material

45 men suffering from non-specific urethritis were treated. The average age was 27 years (range 19 to 56). Nineteen were married, 23 single, and three separated or widowed. In seventeen cases there was a history of

previous non-specific urethritis and in eleven there had been previous gonorrhoea. The incubation period was 10 days or less in four cases, over 10 days in seventeen, and unknown or doubtful in 24. In all but seven cases the duration of the discharge was less than 10 days. In most men the urethritis was well marked, the discharge being purulent in ten and muco-purulent in 27. In five the two-glass urine test showed a haze of pus in both glasses and in nineteen there was a haze in the first glass only; seven patients were unable to provide a sample. Reiter's disease was present in one patient.

Gonorrhoea was excluded by negative results to Gram-stained smears and cultures of the urethral discharge, and infestation by *Trichomonas vaginalis* was excluded by negative results to wet smears and cultures. Wassermann reaction and Kahn and Reiter protein complement-fixation tests were carried out in all cases.

Management

The patients were instructed to attend for daily injections of rolitetracycline nitrate for 4 consecutive days. The routine dosage was 350 mg. per injection and all injections were given in the upper and outer quadrant of the buttock. The aim of follow-up was to see the patient on three occasions during the 2 weeks following completion of therapy and thereafter at increasingly longer intervals for up to 3 months.

Results

Of the 45 patients treated, 42 completed the schedule as prescribed. One patient defaulted after three injections but he had no complaint of adverse reactions. Two patients complained of systemic side-effects; one stated that 15 minutes after his first injection he had had an attack of nausea, sweating, and palpitation, and the other developed headache, vomiting, and pyrexia. Ten patients complained of pain, aching, or stiffness at the injection site; discomfort lasted on average about an hour after at least one of the injections but one

* Received for publication December 16, 1967.

man complained of discomfort lasting for a week. In none of these cases was the complaint of such severity as to warrant interruption of the routine. There were no gastrointestinal side-effects.

Follow-up rates among the 42 patients who completed the schedule of treatment were as follows:

- One patient defaulted immediately;
- 41 (98 per cent.) were followed for up to one week or more.
- 37 (88 per cent.) were followed for 1 week or more.
- 33 (78 per cent.) were followed for 2 weeks or more.
- 20 (47 per cent.) were followed for 9 weeks or more.

Judged by the cessation of the urethral discharge and the presence of a clear urine, the treatment was successful in 37 of the 42 cases (88 per cent.). In six (16 per cent.) of these 37 cases there was a late recurrence of non-specific urethritis.

Discussion

The satisfactory response in 37 of 42 cases was comparable with the best results obtained from oral tetracyclines as reported by other workers. The degree of discomfort caused by the injection was much less than that observed by one of us (R. S. Morton) using oxytetracycline hydrochloride intramuscularly when fourteen of 48 men complained and seven had to be withdrawn from the trial (Morton, 1961). The cause of the systemic reactions is unknown.

Summary and Conclusions

45 cases of non-specific urethritis were treated with rolitetracycline nitrate given as a daily intramuscular injection of 350 mg. for 4 days.

42 patients completed the treatment and 37 (88 per cent.) responded satisfactorily. Six (16 per cent.) of these 37 had a late recurrence of non-specific urethritis.

Two patients complained of systemic reaction, and ten (24 per cent.) of discomfort at the injection site, but in no case did this warrant termination of the treatment.

With this more acceptable local reaction rate, "Tetrex" PMT is an improvement on previous intramuscular preparations of tetracycline.

While rolitetracycline may not be suitable for routine use it offers a reasonable alternative therapy in non-specific urethritis.

The rolitetracycline nitrate (Tetrex PMT) was kindly supplied by Bristol Laboratories. Our thanks are due to Mr W. E. Shaw, S.R.N., F.I.T.V., for his nursing and technical help.

REFERENCE

- Morton, R. S. (1961). *Brit. J. vener. Dis.*, 37, 214.

Le nitrate de rolitétracycline par injection intramusculaire (Tetrex PMT) dans le traitement de l'urétrite non-spécifique

RÉSUMÉ

45 cas d'urétrite non-spécifique ont été traités avec le nitrate de rolitétracycline donné par injection musculaire à la dose de 350 mg. par jour pendant quatre jours.

42 malades ont complété le traitement et 37 (88 pour cent) ont réagi d'une façon satisfaisante. Six (16 pour cent) de ces 37 ont eu une rechute tardive d'urétrite non-spécifique.

Deux malades se sont plaints d'avoir eu une réaction systémique, et dix (24 pour cent) une légère douleur au niveau de l'injection, mais dans aucun de ces cas il n'a été nécessaire de discontinuer le traitement.

Du fait que le taux de la réaction locale est si basse, Tetrex PMT est une amélioration aux préparations intramusculaires antérieures de tétracycline.

Tandis que le rolitétracycline n'est peut-être pas approprié comme traitement de routine, il offre une thérapie alternative et raisonnable dans l'urétrite non-spécifique.